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(71) Applicant (for all designated States except US): LO-  
QUENDO S.P.A. [IT/IT]; Via Nole, 55, I-10149 Torino  
(IT).

(72) Inventors; and

(75) Inventors/Applicants (for US only): GEMELLI, O,  
Roberto [IT/IT]; Loquendo S.P.A., via Nole, 55, I-10149  
Torino (IT). ALBESANO, Dario [IT/IT]; Loquendo  
S.P.A., Via Nole, 55, I-10149 Torino (IT).

(74) Agents: BATTIPEDE, Francesco et al.; Pirelli S.p.A.,  
Viale Sarca, 222, I-20126 Milan (IT).

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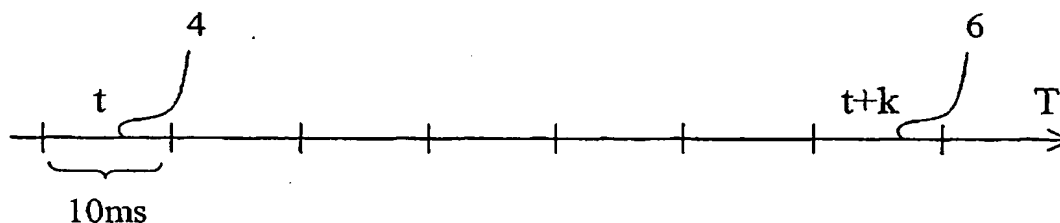
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(54) Title: METHOD OF OPTIMISING THE EXECUTION OF A NEURAL NETWORK IN A SPEECH RECOGNITION SYS-  
TEM THROUGH CONDITIONALLY SKIPPING A VARIABLE NUMBER OF FRAMES



(57) Abstract: A method of optimising the execution of a neural network in a speech recognition system provides for conditionally skipping a variable number of frames, depending on a distance computed between output probabilities, or likelihoods, of a neural network. The distance is initially evaluated between two frames at times  $t$  and  $t+k$ , where  $k$  is a predetermined maximum distance between frames, and if such distance is sufficiently small, the frames comprised between times  $t$  and  $t+k$  are calculated by interpolation, avoiding further executions of the neural network. If, on the contrary, such distance is not small enough, it means that the outputs of the network are changing quickly, and it is not possible to skip too much frames. In that case the method attempts to skip less frames, calculating and evaluating a new distance.

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